

TERTIARY FISH FROM MORWELL, VICTORIA

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This note records the discovery (by P.L.H.) of fossil fish in a late Tertiary deposit occupying an erosion hollow in the surface of the probably Miocene brown coal of the Morwell 1^A coal seam (Fig. 1). The find is particularly

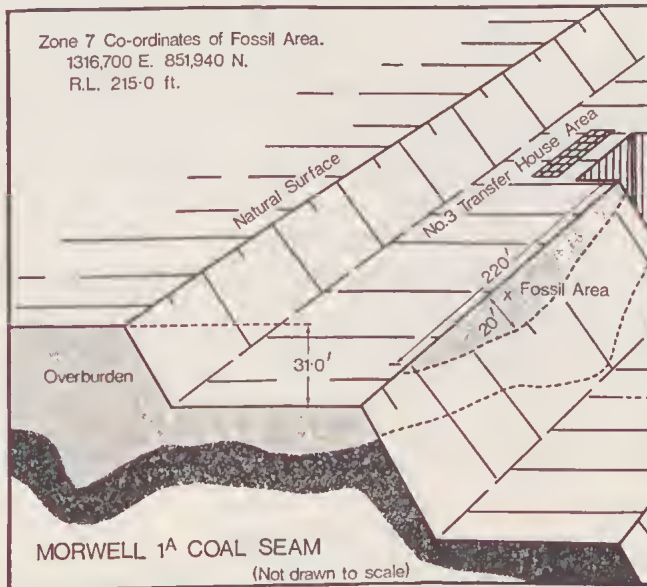


Fig. 1—Schematic diagram of clays occupying a hollow in the Morwell 1^A coal seam.

interesting since Hills (1958, p. 100) stated: 'A notable feature is the complete absence of vertebrates from the brown-coals and associated clays of Victoria. . . .' The beds consist of an upper layer of dark grey, or black, lignitic clay which has yielded the fish, and a lower layer of buff, laminated clay which contains immense numbers of ostracodes of the genus *Mytilocypris*. The ligneous clays which contain the fish also contain innumerable diatoms of the genus *Campylodiscus*, sponge spicules, pollen grains, and a great deal of black, organic material. The clays occur within a large depression which has resulted from a fire in the coal surface. This and other similar depressions in the Morwell Open

cut have been described and illustrated by Gloe (1960, p. 91). Tindale (pers. comm.) is of the opinion that the sediments were laid down in a brackish environment.

Two fish have been discovered, National Museum of Victoria numbers P.26606 and P.26061a, b, and both of these consist of dissociated fragments. It is possible neither to determine their affinities in any detail, nor to state whether they belong to the same taxa. P.26060 consists of a sinuous string 8 mm long of twelve vertebral impressions which bear fine haemal and neural spines. Toward the posterior part of the chain are the dorsal fin and opposed to it fragments of another fin. Neither of these is completely preserved, but a few radials of the dorsal fin are visible, as are some of the lepidotrichia of both fins. P.26061a, b, consists of dissociated ribs, scales, and part of an element tentatively identified as a cleithrum. This represents a larger fish than P.26060. The ribs are well curved and measure about 10 mm in a straight line between extremities. The scales are ctenoid with well defined circuli, about 10-12 strong radii, and numerous, small, marginal spines in the apical region. Only the ventral portion of the supposed cleithrum is present. Very little bone is left in any of the elements; however, occasional fragments are preserved and they present a charcoal-like appearance. It is possible that fin fragments are present but in a very broken and distorted state. The remains of P.26061a, b, are scattered over at least 50 sq. cms. The fish are both typically teleostean in type, and the scales of P.26061a, b, are possibly those of a perciform acanthopterygian. More complete material is necessary to resolve the problem. The authors wish to thank Dr. K. G. McKenzie for identifying the ostracodes, Mr. B. Tindale for identifying the diatoms, and Miss D. B. Wade for drafting the diagram.

References

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